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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,590	01/13/2006	William G. Lutz	63119A	2341
109 7590 08/20/2007 THE DOW CHEMICAL COMPANY INTELLECTUAL PROPERTY SECTION, P. O. BOX 1967 MIDLAND, MI 48641-1967			EXAMINER FISCHER, JUSTIN R	
			ART UNIT 1733	PAPER NUMBER
			MAIL DATE 08/20/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/564,590	Applicant(s) LUTZ ET AL.	
	Examiner Justin R. Fischer	Art Unit 1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>11306</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeuchi (JP 60006434) and further in view of Zharov (EP 1029906). Takeuchi discloses a method of adhesively bonding a plastic pipe 2 having a spigot portion 3 and a plastic object/fitting 2 having a bell 1' (Figures 1-4). In this instance, the reference fails to expressly disclose the makeup of the adhesive composition. Zharov, on the other hand, is directed to an acrylic composition comprising a boron containing initiator and a polymerizable acrylic monomer that is useful in bonding low surface energy substrates, such as polyethylene, polypropylene, and PTFE (Paragraph 54). One of ordinary skill in the art at the time of the invention would have found it obvious to use the adhesive of Zharov in the bonding method Takeuchi since (a) the plastic materials used in the pipe industry are low surface energy substrates and (b) the particular adhesive of Zharov provides a suitable bond between such materials which are otherwise difficult to bond.

With respect to claims 4-9, the abstract of Takeuchi broadly describes a method of bonding plastic pipes. One of ordinary skill in the art at the time of the invention would have recognized the method of Takeuchi as being directed to common plastic

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materials used in the pipe industry, including polyethylene and polypropylene.

Additionally, pipe joining methods commonly involve different materials- one of ordinary skill in the art at the time of the invention would have readily appreciated using the method of Takeuchi with similar or dissimilar materials.

As to claims 10-13, the adhesive composition of Zharov includes an organoborane amine complex, wherein the amine component can be a primary diamine or a secondary diamine (Paragraph 28). Also, with respect to claims 12 and 13, Zharov discloses a wide variety of structures for the organoborane amine complex- one of ordinary skill in the art at the time of the invention would have found it obvious to select any of the disclosed amine complexes absent any conclusive showing of unexpected results.

With respect to claim 14, the adhesive composition of Zharov includes a decomplexing agent, such as a Lewis acid (Paragraph 35).

Regarding claim 15, the adhesive composition of Zharov can include an isocyanate-containing compound (Paragraph 44).

With respect to claim 16, as noted above, the adhesive of Zharov is a polymerizable acrylic monomer (Paragraph 37).

Regarding claims 17-19, the method of Takeuchi comprises the application of an adhesive in a uniform thickness gap 7 between the spigot and the bell (can be viewed as a channel in the bell).

As to claims 20 and 21, while the references fail to define the amount of VOC emissions, one of ordinary skill in the art at the time of the invention would have

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expected the method of Takeuchi in view of Zharov to demonstrate similar emissions to that of the claimed invention (a function of using an extremely similar adhesive composition).

3. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi (JP 11311392) and further in view of Zharov. Yamaguchi is directed to a method of adhesively bonding a repair patch to a surface of a pipe. The reference further teaches that the adhesive system should be one that bonds well with polyethylene pipes/linings (Paragraphs 10 and 11- as obtained from USPTO translator). While the reference fails to identify any specific adhesives, Zharov suggests the use of the claimed adhesives when bonding low surface energy substrates, such as polyethylene. As such, one of ordinary skill in the art at the time of the invention would have found it obvious to use the adhesive of Zharov in the bonding method of Yamaguchi.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. GB 2003243 is directed to a method bonding a plastic insert 16 to a plastic pipe 12 using an acrylic adhesive.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R. Fischer** whose telephone number is **(571) 272-1215**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Justin R Fischer
Primary Examiner
Art Unit 1733

JRF
August 16, 2007